

**REMARKS**

Claims 1-49 were originally filed in the present application. No claims are currently canceled or added. Consequently, claims 1-49 remain pending in the present application.

Reconsideration of the present application in light of the above amendments and the following remarks is respectfully requested.

**Rejections under 35 U.S.C. §102(e)****Claim 38: Ko**

Claims 38-39 and 42-43 were rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent Application No. 11/407,633 to Ko ("Ko"). However, submitted herewith is a signed declaration from inventors Shui-Ming Cheng, Ka-Hing Fung, Kuan Lun Cheng, and Yi-Ming Sheu, establishing invention and reduction to practice of the presently claimed subject matter prior to the August 12, 2003 filing date of U.S. Patent Application No. 10/639,170, which is the parent application of Ko.

Consequently, Ko is disqualified as a §102(e) reference. Accordingly, Applicants respectfully request the Examiner withdraw the §102(e) rejection of claim 38 and its dependent claims.

**Claim 1: Bohr**

Claim 1 recites:

A semiconductor device, comprising:  
an isolation region located in a substrate;  
an NMOS device located partially over a surface of the substrate; and  
a PMOS device isolated from the NMOS device by the isolation region and located partially over the surface;  
wherein a first one of the NMOS and PMOS devices includes first source/drain regions recessed within the surface; and  
wherein a second one of the NMOS and PMOS devices includes second source/drain regions at least partially extending above the surface.

Claims 1, 5-9, 11, 12, and 15 were rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent Application No.10/608,870 to Bohr et al. ("Bohr"). The PTO provides in MPEP §2131 that, to anticipate a claim, a reference must teach every element of the claim. Therefore, to sustain this rejection with respect to claim 1, Bohr must contain all of the elements of claim 1. However, Bohr does not disclose an NMOS device and a PMOS device each located partially over a surface of a substrate, wherein a first one of the NMOS and PMOS devices includes first source/drain regions recessed within the surface, and wherein a second one of the NMOS and PMOS devices includes second source/drain regions at least partially extending above the surface. In contrast, Bohr discloses that the source/drain regions of one of the NMOS and PMOS devices is flush with the surface of the substrate, such that it is neither recessed within the substrate surface nor at least partially extending above the surface. Accordingly, the §102(e) rejection of claim 1 and its dependent claims is not supported by Bohr. Consequently, Applicants respectfully request that the Examiner withdraw the §102 rejection with respect to claim 1.

Claim 44: Bohr

Claim 44 recites:

44. A method of manufacturing a semiconductor device, comprising:
  - forming an isolation region located in a substrate;
  - forming an NMOS device located partially over a surface of the substrate; and
  - forming a PMOS device isolated from the NMOS device by the isolation region and located partially over the surface;wherein a first one of the NMOS and PMOS devices includes first source/drain regions recessed within the surface; and
- wherein a second one of the NMOS and PMOS devices includes second source/drain regions at least partially extending above the surface.

Claim 44 was also rejected under 35 U.S.C. §102(e) as being anticipated by Bohr. However, much in the same manner described above with respect to claim 1, Bohr fails to disclose a method of manufacturing a NMOS device and a PMOS device each located partially over a surface of a substrate, wherein a first one of the NMOS and PMOS devices includes first

source/drain regions recessed within the surface, and wherein a second one of the NMOS and PMOS devices includes second source/drain regions at least partially extending above the surface. Accordingly, the §102(e) rejection of claim 44 and its dependent claims is not supported by Bohr. Consequently, Applicants respectfully request the Examiner withdraw the §102 rejection with respect to claim 44.

### **Rejections Under 35 U.S.C. §103**

Claims 2-4, 13-14, 16-22, 24-27, 28-33, 35-37 and 45-46 were rejected under 35 U.S.C. §103 as being unpatentable over Bohr in view of U.S. Patent No. 5,963,803 to Dawson (“Dawson”)

As the PTO recognizes in MPEP §2142:

*... The Examiner bears the initial burden of factually supporting any prima facie conclusion of obviousness. If the Examiner does not produce a prima facie case, the applicant is under no obligation to submit evidence of nonobviousness...*

It is submitted that, in the present case, the Examiner has not factually supported a *prima facie* case of obviousness for the following reasons.

#### **Claim 1: Bohr in view of Dawson**

#### **Even When Combined, the References Do Not Teach the Claimed Subject Matter**

As provided in 35 U.S.C. §103:

*A patent may not be obtained ... if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains ... (Emphasis added)*

Thus, when evaluating a claim for determining obviousness, all limitations of the claim must be evaluated. However, in the context of claim 1, Bohr fails to teach or suggest a NMOS

device and a PMOS device each located partially over a surface of a substrate, wherein a first one of the NMOS and PMOS devices includes first source/drain regions recessed within the substrate, and wherein a second one of the NMOS and PMOS devices includes second source/drain regions at least partially extending above the surface. However, much in the same manner as described above with respect to the §102 rejection of claim 1, Bohr merely discloses that the source/drain regions of only one of the NMOS and PMOS devices may extend above the substrate while the source/drain regions of the other of the NMOS and PMOS devices are flush with the substrate, such that neither are recessed within the substrate nor extending from the substrate.

Moreover Dawson fails to cure the shortcomings of Bohr with respect to claim 1. In contrast, Dawson merely discloses that the source/drain regions of the NMOS and PMOS devices are flush with the substrate, such that neither are recessed within the substrate nor extending from the substrate.

Because Bohr and Dawson each independently fail to teach or suggest a NMOS device and a PMOS device each located partially over a surface of a substrate, wherein a first one of the NMOS and PMOS devices includes first source/drain regions recessed within the substrate, and wherein a second one of the NMOS and PMOS devices includes second source/drain regions at least partially extending above the surface, the combination of Bohr and Dawson necessarily fails to teach a first one of the NMOS and PMOS devices includes first source/drain regions recessed within the substrate, and wherein a second one of the NMOS and PMOS devices includes second source/drain regions at least partially extending above the surface. Therefore, it is impossible for the combination of Bohr and Dawson to render obvious the subject matter of claim 1, as a whole, or its dependent claims, and the explicit terms of §103 cannot be met.

Thus, whether taken separately or together, the combination of Bohr and Dawson fail to teach or suggest each and every limitation of claim 1. Accordingly, Applicants respectfully request the Examiner withdraw the §103 rejection with respect to claim 1.

*Claim 16: Bohr in view of Dawson*

Claims 16-22 and 24-27 were also rejected under 35 U.S.C. §103(a) as being unpatentable over Bohr in view of Dawson. As described above, when evaluating a claim for determining obviousness, all limitations of the claim must be evaluated. However, much in the same manner as described above with respect to claim 1, the combination of Bohr and Dawson, whether considered together or separately, fail to teach or suggest a NMOS device and a PMOS device each located partially over a surface of a substrate, wherein a first one of the NMOS and PMOS devices includes first source/drain regions recessed within the substrate, and wherein a second one of the NMOS and PMOS devices includes second source/drain regions at least partially extending above the surface as recited in the context of claim 16. Accordingly, the §103(a) rejection of claim 28 and its dependent claims are not supported by Bohr in view of Dawson. Consequently, Applicants respectfully request the Examiner withdraw the §103 rejection with respect to claim 16.

*Claim 28: Bohr in view of Dawson*

Claims 28-33 and 35-37 were also rejected under 35 U.S.C. §103(a) as being unpatentable over Bohr in view of Dawson. As described above, when evaluating a claim for determining obviousness, all limitations of the claim must be evaluated. However, much in the same manner as described above with respect to claims 1 and 16, the combination of Bohr and Dawson, whether considered together or separately, fail to teach or suggest a NMOS device and a PMOS device each located partially over a surface of a substrate, wherein a first one of the NMOS and PMOS devices includes first source/drain regions recessed within the substrate, and wherein a second one of the NMOS and PMOS devices includes second source/drain regions at least partially extending above the surface as recited in the context of claim 28. Accordingly, the §103(a) rejection of claim 28 and its dependent claims is not supported by Bohr in view of Dawson. Consequently, Applicants respectfully request the Examiner withdraw the §103 rejection with respect to claim 28.

*Claim 47: Bohr in view of Wu*

Claims 47-49 were rejected under 35 U.S.C. §103(a) as being unpatentable over Bohr in view of U.S Patent No. 6,194,258 to Wu ("Wu"). As described above, when evaluating a claim for determining obviousness, all limitations of the claim must be evaluated. However, much in the same manner as described above with respect to claims 1, 16, 28, and 44, Bohr fails to teach or suggest a NMOS device and a PMOS device each located partially over a surface of a substrate, wherein a first one of the NMOS and PMOS devices includes first source/drain regions recessed within the substrate, and wherein a second one of the NMOS and PMOS devices includes second source/drain regions at least partially extending above the surface as recited in the context of claim 47.

Moreover, Wu fails to cure the shortcomings of Bohr. That is, Wu also fails to teach or suggest a NMOS device and a PMOS device each located partially over a surface of a substrate, wherein a first one of the NMOS and PMOS devices includes first source/drain regions recessed within the substrate, and wherein a second one of the NMOS and PMOS devices includes second source/drain regions at least partially extending above the surface as recited in the context of claim 47. In contrast, Wu merely discloses that the source/drain regions of the NMOS and PMOS devices are flush with the substrate, such that neither are recessed within the substrate nor extending from the substrate.

Because Bohr and Wu each independently fail to teach or suggest a NMOS device and a PMOS device each located partially over a surface of a substrate, wherein a first one of the NMOS and PMOS devices includes first source/drain regions recessed within the substrate, and wherein a second one of the NMOS and PMOS devices includes second source/drain regions at least partially extending above the surface, the combination of Bohr and Wu necessarily fails to teach a first one of the NMOS and PMOS devices includes first source/drain regions recessed within the substrate, and wherein a second one of the NMOS and PMOS devices includes second source/drain regions at least partially extending above the surface. Therefore, it is impossible for the combination of Bohr and Wu to render obvious the subject matter of claim 47, as a whole, or its dependent claims, and the explicit terms of §103 cannot be met.

Thus, whether taken separately or together, the combination of Bohr and Wu fail to teach or suggest each and every limitation of claim 47. Accordingly, the §103(a) rejection of claim 47 and its dependent claims is not supported by Bohr in view of Wu. Consequently, Applicants respectfully request the Examiner withdraw the §103 rejection with respect to claim 47.

**Conclusion**

All matters set forth in the Office Action have been addressed. Accordingly, it is believed that all claims are in condition for allowance. Favorable consideration and an early indication of allowability are respectfully requested.

Should the Examiner deem that an interview with Applicants' undersigned attorney would expedite consideration, the Examiner is invited to call the undersigned attorney at the telephone number indicated below.

Respectfully submitted,



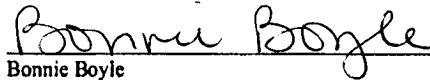
Dave R. Hofman  
Registration No. 55,272

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HAYNES AND BOONE, LLP  
901 Main Street, Suite 3100  
Dallas, Texas 75202-3789  
Telephone: 713/547-2523  
Facsimile: 214/200-0853  
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Bonnie Boyle